

## Flight-Deck Interface for High-Precision Taxi Control, Phase II

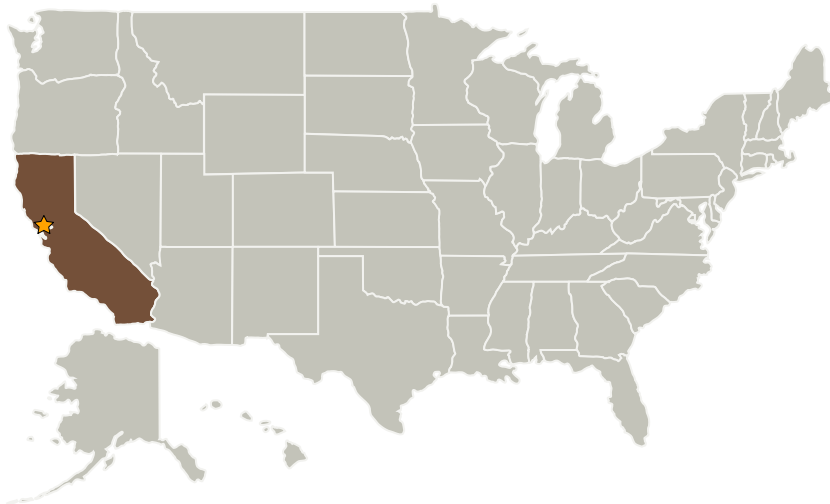
Completed Technology Project (2005 - 2007)



## Project Introduction

Faced with ever-increasing projections of air traffic, airport expansion plans, changes in operational requirements and introduction of advanced technologies are all being considered to increase airport capacity. These enhancements serve to improve throughputs at the airports, but the resulting increases in surface traffic and airport complexity would lead to taxi delays and surface traffic congestion that offset some of the expected benefits. New operational concepts are needed to preserve the envisioned benefits. A Surface Operation Automation Research (SOAR) project has been exploring a concept of collaborative automation between surface traffic management and the flight deck. The Phase I research represents a major step towards the concept of a Flight-deck Automation for Reliable Ground Operation (FARGO) system, with results that demonstrate the feasibility of guidance and control technologies to deliver high-precision taxi performance, and interface technologies capable of conveying guidance and control information to the flight crew to achieve the precise taxi control. The proposed Phase II effort focuses on the development of a complete FARGO system, including operational procedures, aircraft guidance and control reference and monitor displays, and traffic monitor display and alert systems. Efforts beyond Phase II should target the transition of the FARGO technologies to the avionics community.

## Primary U.S. Work Locations and Key Partners



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## Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Management	2
Technology Areas	2

## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Ames Research Center (ARC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Optimal Synthesis, Inc.	Supporting Organization	Industry Small Disadvantaged Business (SDB)	Los Altos, California

## Primary U.S. Work Locations

California

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

## Technology Areas

**Primary:**

- TX16 Air Traffic Management and Range Tracking Systems
  - └ TX16.3 Traffic Management Concepts